Strategic and affective motives for self-deception

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- beliefs are inputs to decision-making
- Bayesian updating in response to evidence

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This talk

- Self-deception in the service of persuasion (strategic goals)
- Self-deception to reduce anticipatory anxiety (affective goals)

Deception and Self-Deception

Schwardmann & van der Weele, Nature Human Behavior, 2019

People are often overconfident about their ability ...

(e.g. Moore & Healy, 2008, Hoelzl & Rustichini 2005, Anderson et al. 2012, Burks et al. 2013)

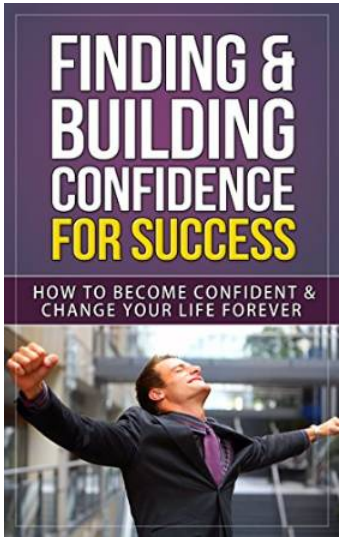
...but overconfidence leads to mistakes.

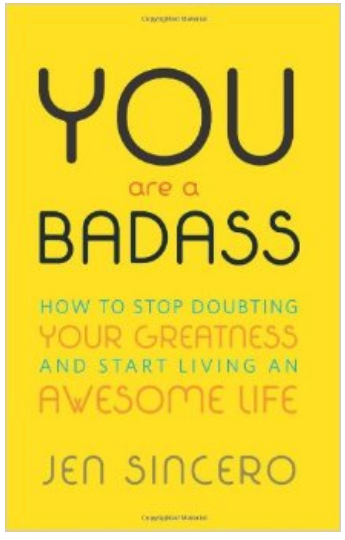
(e.g. Malmendier & Tate 2008, Biais & Hilton, 2005, Koellinger et al., 2007)

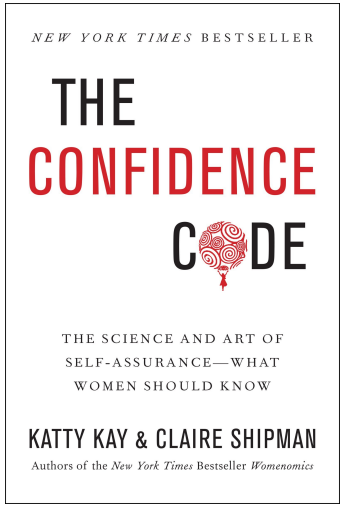
So why become overconfident?

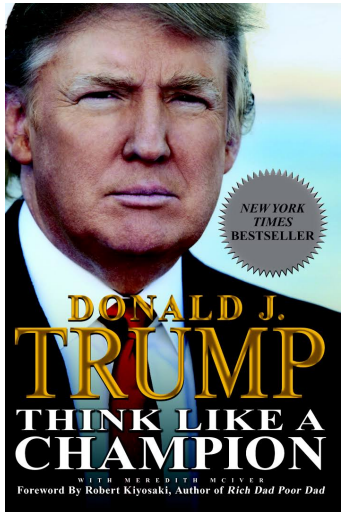
$\rightarrow$ Overconfidence facilitates persuasion or deception by reducing *give-away cues* and *moral costs of lying* (Trivers 1986, Von Hippel & Trivers 2011)

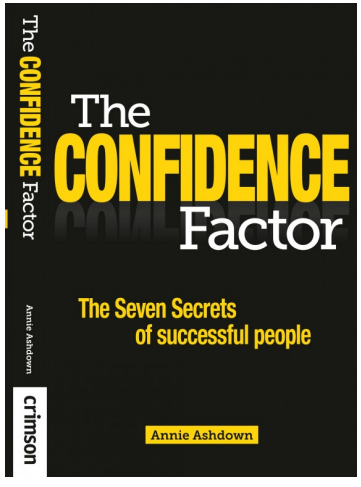
"Show me someone without an ego, and I'll show you a loser."









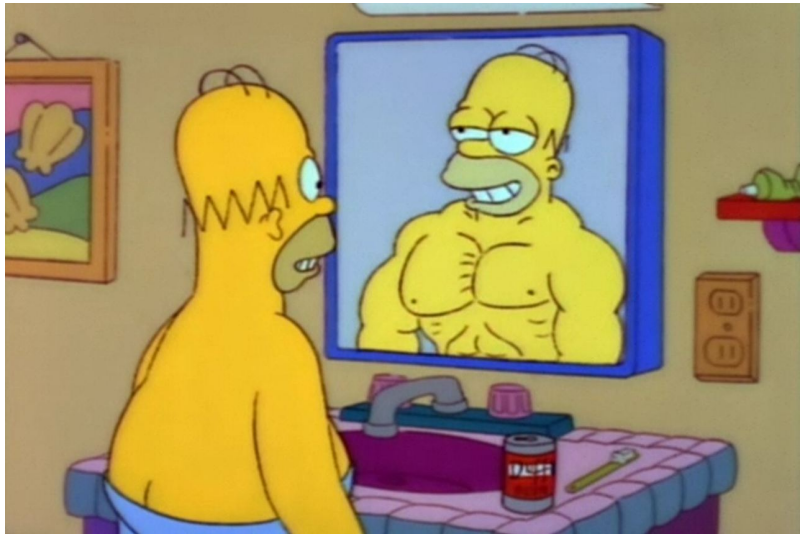


We conduct a laboratory experiment

Design outline (288 participants):

1. All participants do IQ test
2. Sample split into treatment group ("contestants"), who is alerted to subsequent interview stage, and, control group, who is not
3. Incentive compatible elicitation of beliefs about performance
4. Noisy signal about performance and another belief elicitation
5. Face to face "interviews" between "contestants" (treatment group) and "employers" (control group), with profitable persuasion opportunity

Self-deception



- A profitable opportunity to persuade increases privately stated confidence by 4-5 ppts
- Effect driven by subjects that believe that confidence aids persuasion

Deception

- We use noise component of feedback signal to shift confidence
- A 1 ppt increase in confidence increases evaluations by about 0.32 ppts
- Effect driven by more confident messages **and** more convincing non-verbal performance

Implications

- Overconfidence has strategic value $\rightarrow$ motive for self-deception
- Supports theories about the social origins of overconfidence
- Overconfidence more likely in competitive environments where (initial) ability measures are noisy and persuasion is important (e.g. politics, entrepreneurship, finance)

Self-persuasion: Evidence from International Debating Competitions

Schwardmann, Tripodi & van der Weele, AER, 2022

Self-persuasion

A debater assigned to arguing in favor of the EU's introduction of the freedom of movement is ...

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A debater assigned to arguing in favor of the EU's introduction of the freedom of movement is ...

... more likely to believe that a majority of UK citizens think that the Schengen Area is advantageous for the UK.

Persuasion goal $\rightarrow$ **Factual beliefs**

Self-persuasion

A debater assigned to arguing in favor of the EU's introduction of the freedom of movement is ...

... more likely to give money to ACT4FreeMovement, a charity that campaigns for freedom of movement for EU citizens.

Persuasion goal $\rightarrow$ **Attitudes**

Self-persuasion

A debater assigned to arguing in favor of the EU's introduction of the freedom of movement is ...

... more likely to believe that more than half of the debates happening in **other** rooms are won by their side.

Persuasion goal $\rightarrow$ **Confidence in position**

Anticipatory anxiety and wishful thinking

Engelmann, Le Breton, Schwardmann, Salem & van der Weele, 2023

Do people self-deceive in order to alleviate anxiety about adverse future outcomes?

- Scant evidence from experimental econ (Mayraz 2011-, Huseynov et al. 2023-!, Coutts 2018-, Barron 2020-, Mijovic-Prelec and Prelec 2010)-?
- Inconclusive evidence from psychology on asymmetric updating on info about life-events (Sharot 2011-, 2014, Shah et al. 2016-, Burton et al. 2021-) and on desirability bias (Krizan and Windschitl 2007-)

Pattern recognition

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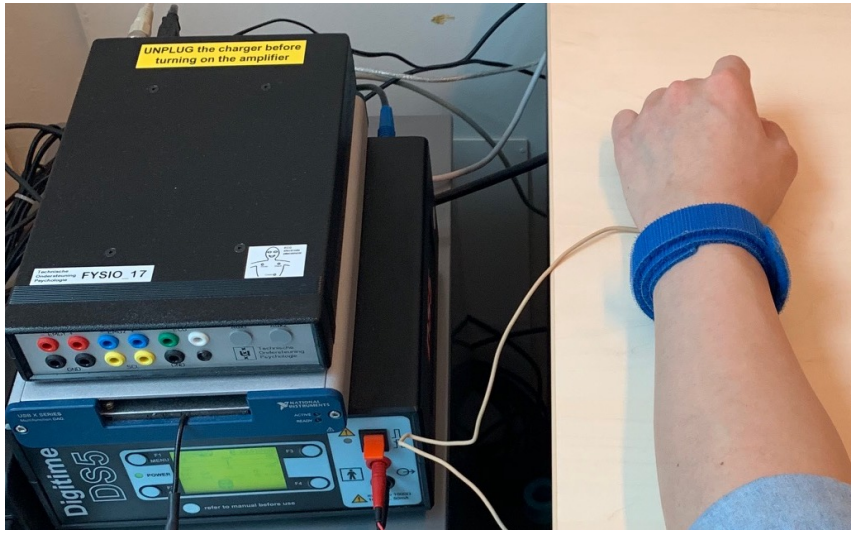
Inducing anxiety

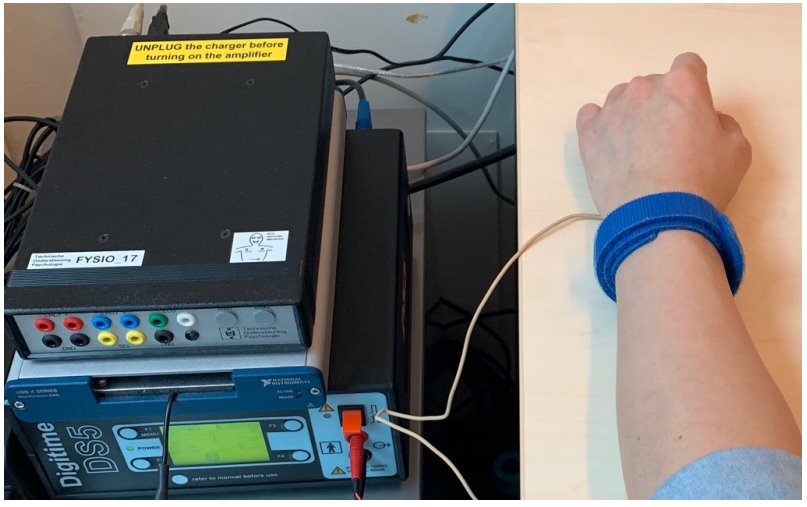


- Electric shocks are precisely timed negative consumption events
- They cause anxiety: Berns et al. (2006); Schmitz and Grillon (2012); Engelmann et al. (2015, 2017, 2019)

Experimental design

Pattern recognition

Electric shock



Treatment varies whether shocks occur for left or right-tilted patterns

$\rightarrow$ *A wishful thinker is more likely to believe that they saw a no-shock pattern*

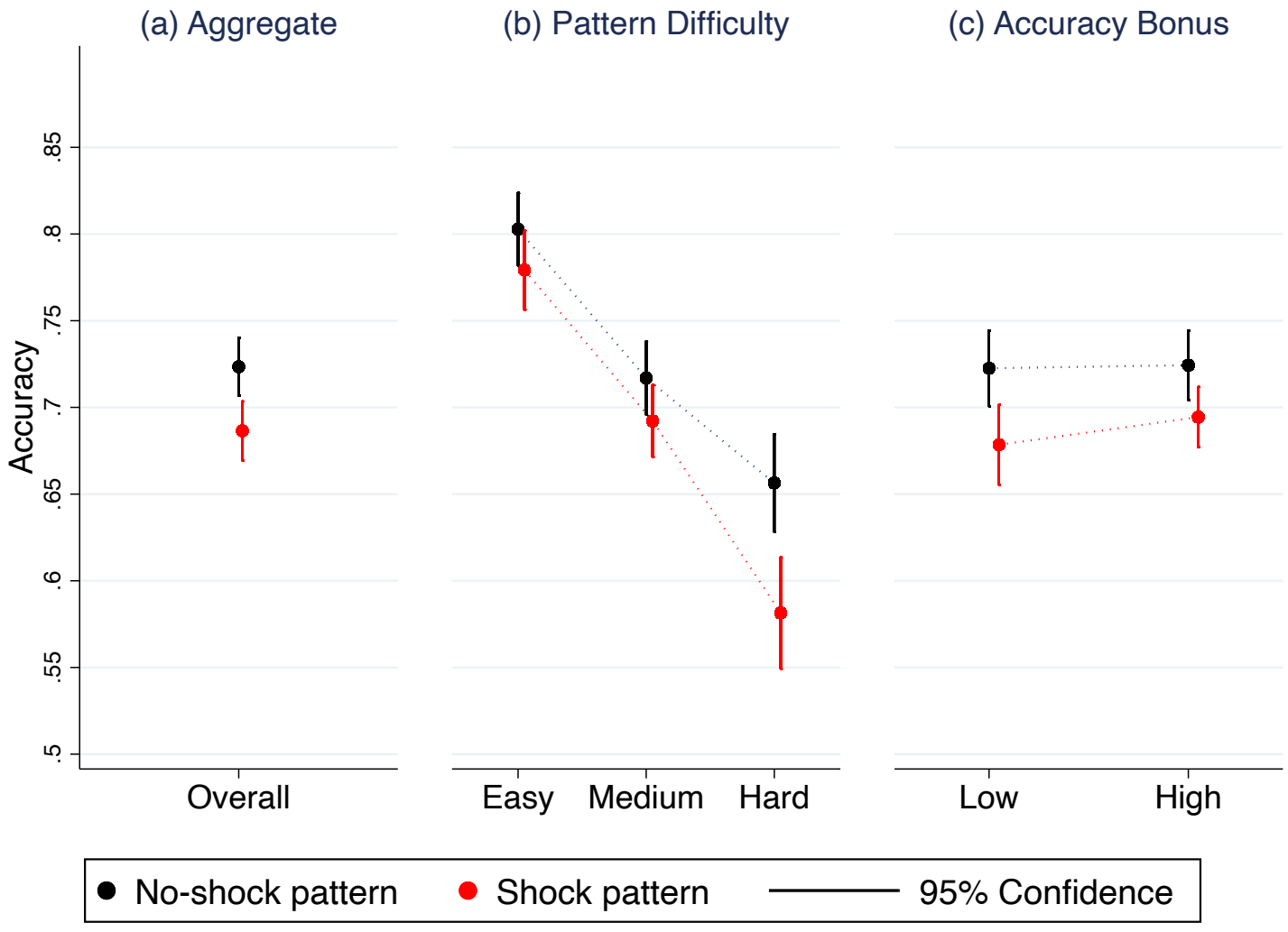
Measure of wishful thinking: Accuracy no-shock patterns – accuracy shock patterns

Experimental design

Further treatments:

- Ambiguity of evidence: High, medium, and low difficulty of pattern recognition, calibrated based on previous performance
- Accuracy incentives: Either 1 euro or 20 euro prize in Becker-DeGroot Marschak mechanism of one randomly selected trial

Results


(a) Aggregate
(b) Pattern Difficulty
(c) Accuracy Bonus
Accuracy
.5
.55
.6
.65
.7
.75
.8
.85
Overall
Easy
Medium
Hard
Low
High
No-shock pattern
Shock pattern
95% Confidence

Five experiments show that wishful thinking is

- robust across sources of anxiety (shocks vs. money) and 3 different cognitive tasks
- increasing in the ambiguity of evidence
- responsive to accuracy incentives, but only when participants can affect signal precision
- not present in the gain domain, and plausibly driven by emotions of anxiety and fear

Motivated health risk denial and preventative health care investments

Schwardmann, JHE, 2019

- I enrich the standard economic model by anticipatory utility and the ability to self-deceive (Brunnermeier & Parker 2005, Bénabou & Tirole 2016)
- Agent invests in prevention if disease has a high risk, high severity, and prevention is effective and cheap $\rightarrow$ as in health belief model
- Agent manipulates their beliefs to maximize a weighted sum of consumption and anticipatory utility.

Motivated health risk denial and preventative health care investments

Two substitute strategies for coping with anxiety

- deny health risk (i.e. choose low $\tilde{\theta}$)
- invest in prevention (i.e. choose high x)

$\Longrightarrow$ If *ability to act* is limited because of high prices, low empowerment, or ineffective prevention technologies, then we expect more health risk denial.

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> *"There is potentially another reason the poor may hold on to beliefs that might seem indefensible: When there is little else they can do, hope becomes essential." (Banerjee and Duflo 2011)*

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- The demand for prevention in developing countries is low. (Dupas 2011, Miller et al. 2007, Stockman et al. 2007)
- The demand for prevention is very price-elastic. (Dupas 2011, Ashraf et al. 2010, Cohen & Dupas 2010, and Kremer & Miguel 2007)

Implications

Under the assumptions of the model

- Debiasing beliefs is not welfare-improving: not all nudges are cheap
- Tax-funded prevention subsidy is welfare-improving